Remarks

Reconsideration and allowance of all claims are respectfully requested. Claims 1-78 are pending.

Initially, Applicants gratefully acknowledge the indication of allowability of claims 2, 4, 14, 23, 27, 29, 39, 48, 49, 54, 56, 64 & 75 if rewritten into independent form including all the limitations of the base claim and any intervening claims. Presently, these dependent claims have not be rewritten into independent form since the independent claims from which they directly or ultimately depend are believed to be in condition for allowance for the reasons stated below. New claim 78 is believed allowable for the same reasons as claims 2 & 14, which are indicated in the Office Action to contain allowable subject matter.

Claims 1, 3, 5, 8-12, 28, 30, 33-37, 51, 53, 55, 57 and 60-63 stand rejected under 35 U.S.C. §102(e) as being anticipated by Pinder et al. (U.S. Patent No. 6,219,358; hereinafter Pinder), while claims 6-7, 13, 15-22, 24, 25, 31-32, 38, 40-47, 50, 52, 58-59, 66-74, 76 & 77 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Pinder in view of Robinett et al. (U.S. Patent No. 6,351,471 B1; hereinafter Robinett). Each of these rejections is respectfully traversed, and reconsideration thereof is requested.

In one aspect, Applicants' invention is directed to a technique for re-mapping packet identifier (PID) values in transport packets associated with multiple transport streams to be multiplexed onto a single shared transport channel. This technique includes: providing at least one PID re-map table having re-map values indexed by n possible PID values of transport packets associated with at least one transport stream of the multiple transport streams, wherein n is less than all possible PID values of the transport packets within the multiple transport streams. The technique further includes comparing PID values of transport packets associated with the at least one transport stream with the n possible PID values of the at least one PID re-map table, and when a match is found, indexing the at least one PID re-map table using the matching PID value, generating therefrom a re-map value, and replacing the matching PID value by the re-map value. Advantageously, Applicants' re-mapping technique ensures unique identification of transport packets associated with multiple transport streams to be multiplexed onto a transport channel for demultiplexing by a single transport demultiplexor.

With respect to the anticipation rejection, it is well settled that there is no anticipation of a claim unless a single prior art reference discloses: (1) all the same elements of the claimed invention; (2) found in the same situation as the claimed invention; (3) united in the same way as the claimed invention; and (4) in order to perform the identical function as the claimed invention. In this instance, Pinder fails to disclose various aspects of Applicants' invention as recited in the independent claims presented, and as a result, does not anticipate (or even render obvious) Applicants' invention.

Pinder discloses an adaptive rate control for insertion of data into arbitrary bit rate data streams. Pinder describes standard MPEG configuration tables such as program specific information tables or system information tables which describe the relationships of the MPEG packets and identify their corresponding packet identifier (PID). Each packet carries a PID 206 (see Fig. 2) located in the packet header 202. The MPEG tables list the PIDs for all packets associated with a particular program. Fig. 3 illustrates the relationship between the transport stream 202, the MPEG packets and tables therein, and the function of PIDs. Illustrative of the function of PIDs, they can be used to locate the associated tables in Fig. 3A or the corresponding packets in Fig. 3B. For example, Program Association Table 304 indicates that all packets with a PID of 22 are Program Map Tables (PMT) associated with program 1. The PMT 322 that has a PID of 22 indicates the PIDs of the packet that make up the various components of the stream associated with program 1. (See Figs. 2 & 3, and col. 7, lines 20-47 of Pinder.)

Initially, Applicants respectfully submit that Pinder does not teach or suggest their recited process for re-mapping packet identifier values which includes providing at least one PID re-map table having re-map values <u>indexed by n possible PID values</u> of transport packets associated with the at least one transport stream of the multiple transport streams, wherein <u>n is less than all possible PID values of the transport packets</u> within the multiple transport streams. For an alleged teaching of this aspect of Applicants' recited invention, the Office Action generally cites column 7 & 8 of Pinder. However, Applicants respectfully submit that Figure 3, and element 304 in particular (cited in the Office Action), do not relate to PID re-mapping. Element 304 is simply standard MPEG syntax. The program map tables (PMT) simply map a program into a given set of packet IDs. These tables are a directory and <u>no re-mapping</u> occurs in the processing described at columns 7 & 8 of Pinder.

Although not cited in the Office Action against Applicants' independent claims, a form of PID re-mapping is described at columns 10 & 11 of Pinder. For example, Pinder teaches in an exemplary embodiment, that packet router 504 also performs additional functions, such as PID re-mapping. Further, Pinder teaches that packet identifier (PID) re-mapping would occur at PID re-mapper 527, of packet router 504 (see col.11, lines 10-43). Pinder specifically teaches that to eliminate the possibility of conflict of PID allocation, all PIDs are re-mapped to a format that is specific for television system 100. Thus, to the extent Pinder describes PID re-mapping, the patent expressly teaches that all PIDs are re-mapped. This teaching is clearly different from that of Applicants' recited invention. In Applicants' independent claims, the at least one PID re-map table has re-map values indexed by n possible PID values of the transport packets associated with the transport streams. Further, Applicants expressly recite that n is less than all possible PID values of the transport packets within the multiple transport streams. Thus, in Applicants' invention, only selected PIDs are re-mapped because n is less than all possible PID values. This allows Applicants' re-mapping process to be more efficient, and as stated in the patent, allows multiple transport streams to be multiplexed onto a single channel for demultiplexing by a single transport demultiplexor. It is Applicants' use of less than all possible PID values for re-mapping (i.e., n), which provides the enhanced efficiency.

Further, because Pinder describes processing for a television system broadcaster, Applicants respectfully submit that one of ordinary skill in the art would not have modified the PID re-mapping described therein to only re-map n possible PID values of transport packets within the multiple transport streams since signal quality would be degraded. In contrast, the present invention is described in the application as being useful for a receiver to demultiplex multiple transport streams employing a single transport demultiplexor. In view of these different environments, Applicants respectfully submit that one of ordinary skill in the art would not have modified Pinder in a manner such as recited by Applicants in the independent claims presented.

For the above reasons, Applicants respectfully submit that independent claims 1, 15, 26, 40, 51, 52, 53 & 67 patentably distinguish over the teachings of Pinder. Reconsideration and withdrawal of the anticipation rejection based thereon is therefore respectfully requested.

With respect to the obviousness rejection to various dependent claims, Applicants note that an "obviousness" determination requires an evaluation of whether the prior art taken as a whole would suggest the claimed invention taken as a whole to one of ordinary skill in the art. In evaluating claimed subject matter as a whole, the Federal Circuit has expressly mandated that functional claim language be considered in evaluating a claim relative to the prior art. Applicants respectfully submit that the application of these standards to the claims at issue leads to the conclusion that the recited subject matter would not have been obvious to one of ordinary skill in the art based on the applied patents.
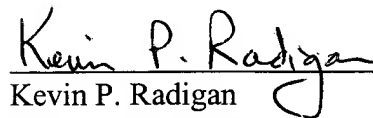
A careful reading of Robinett fails to uncover any teaching or suggestion relevant to the above-noted deficiencies of Pinder when applied against the independent claims presented. Robinett describes a method and system for re-multiplexing program bearing data. The re-multiplexing method and system are applicable to MPEG-2 compliant transport streams carrying video programs. A careful reading of Robinett fails to uncover any discussion or suggestion of a PID re-mapping approach such as recited by Applicants in the independent claims presented.

Robinett is cited in the Office Action for teaching interleaving of packets. Without acquiescing to this characterization of the teachings of Robinett, Applicants respectfully submit that the patent is not relevant to the above-noted deficiencies of Pinder when applied against Applicants' PID re-mapping process of the independent claims. Thus, the dependent claims at issue are believed allowable for the same reasons as the independent claims, as well as for their own additional characterizations.

For all the above reasons, Applicants respectfully submit that all claims are in condition for allowance, and such action is respectfully requested.

Applicants' undersigned attorney is available should the Examiner wish to discuss this application further.

Respectfully submitted,

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